

Confidently Protect Students & Maintain Security

Best Practices | Helpful Tips
K12 Thoughts, Actions & Activities

Presented by:

Rich Bates (LightEdge) & Mike Lauer (ICN)



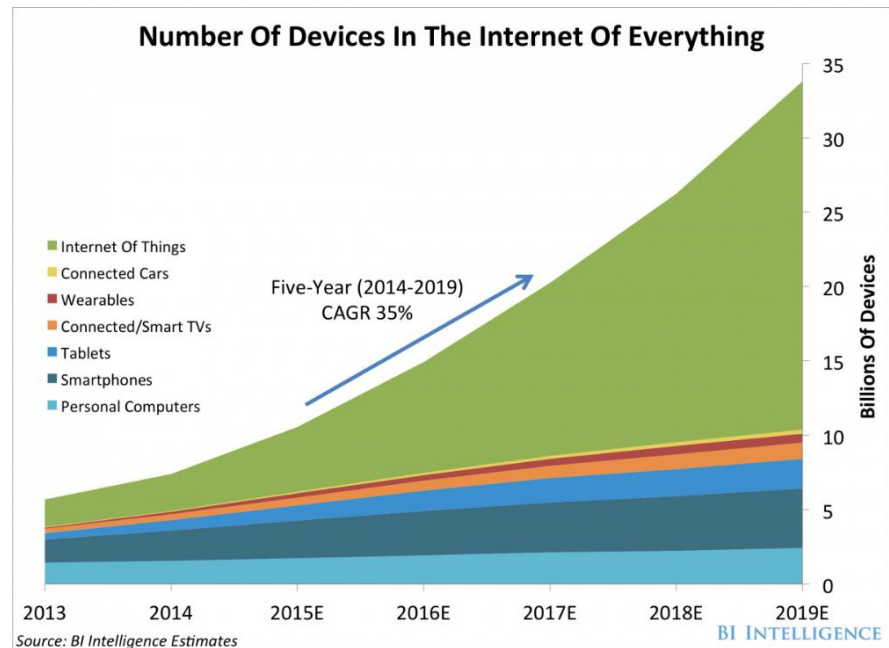
Security Tips & Guides

- CyberBullying Tips
- Educate via video to all levels
- CIPA - Children's Internet Protection Act
- COPPA - Children's Online Privacy Protection Act
- *See attached listings for videos & learning guides*

Trend: Device Growth Continues

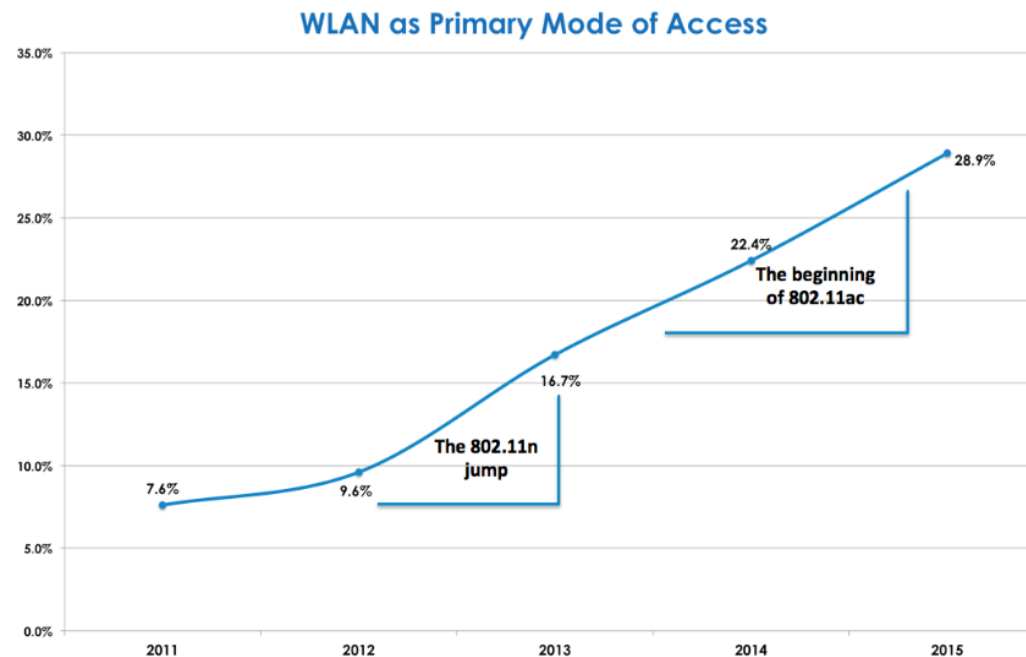
More devices and newer device types are entering the network

- 33 Billion endpoints projected to be connected by 2020 – Gartner
- New device types entering the network
 - 'headless' IoT, wireless sensor nodes, beacons, wearables



Trend: Devices Going Wireless

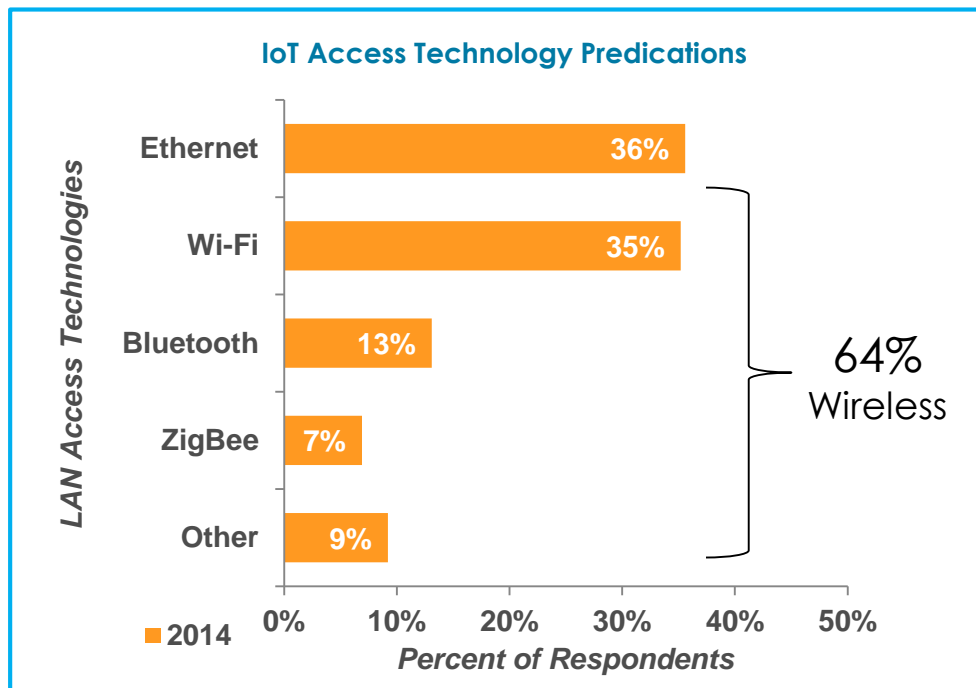
Wi-Fi becoming the primary access medium



- Each generation of Wi-Fi technology accelerates the migration to wireless for users

Trend: Devices Going Wireless

Wi-Fi becoming the primary access medium



- IoT devices going wireless

© Infonetics, M2M Strategies by Vertical: N. American Enterprise Survey, January 2014

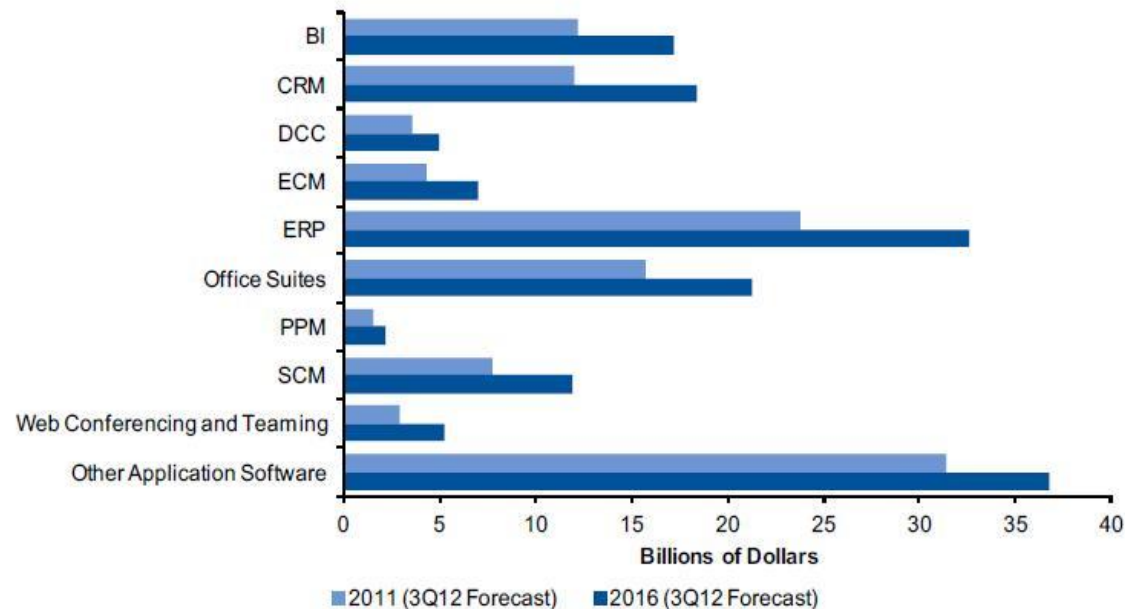
BROADBAND STRONG
STRONG FLEXIBLE FAST



Trend: Mobile Application Use Mirrors Device Growth

Enterprises must support more applications including non-enterprise apps

Enterprise Application Software Forecast Comparison by Segment, Total Software Revenue, Worldwide, 2011 and 2016



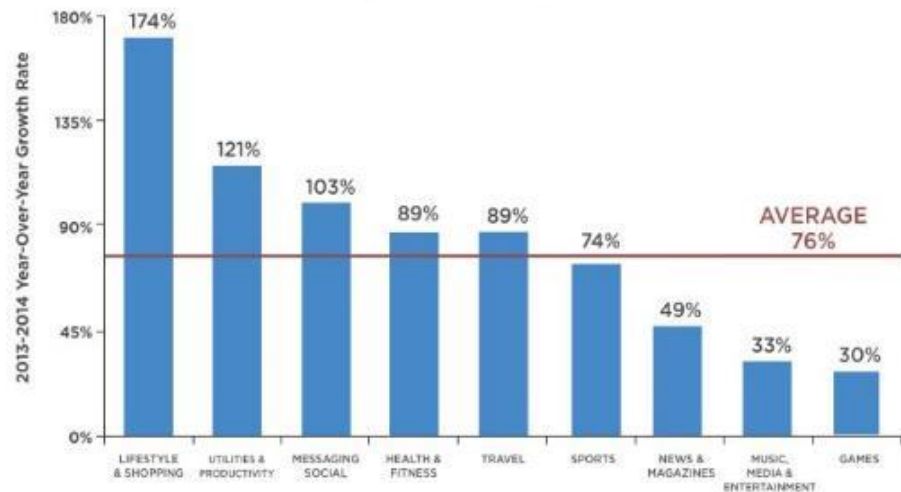
DCC = digital content creation
ECM = enterprise content management
PPM = project and portfolio management

Trend: Mobile Application Use Mirrors Device Growth

Enterprises must support more applications including non-enterprise apps

- Application growth mirrors the growth in device count.
- Growth in enterprise application growth continues
- Mobile Use grows 76% YoY

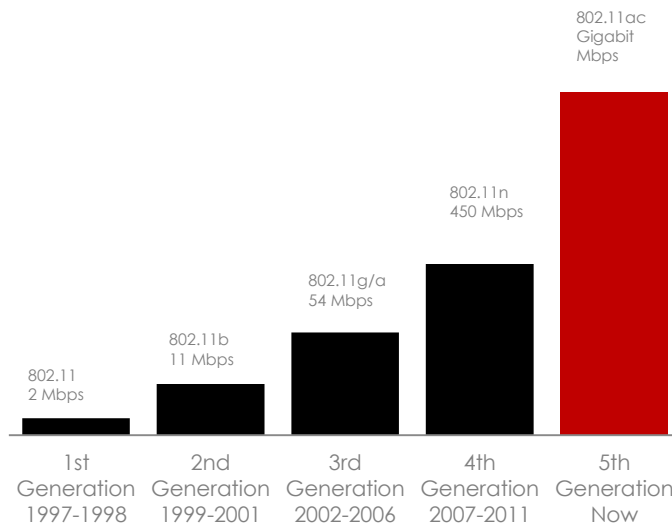
Mobile Use Grows 76% Year-Over-Year (Sessions)



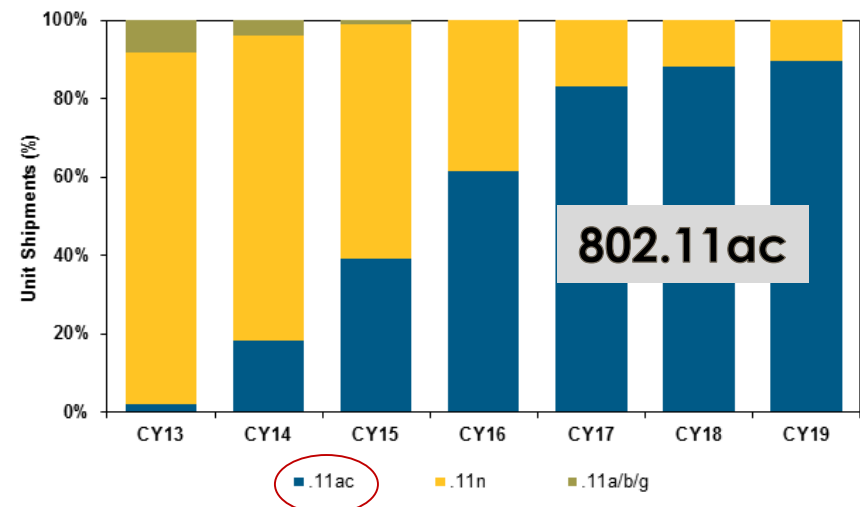
Trend: Need for More Speed

Migration to 802.11ac continues

Wi-Fi Standards Evolution



Migration to 802.11ac



Infonetics, Wireless LAN Equipment Quarterly Worldwide and Regional Market Share: 4Q14

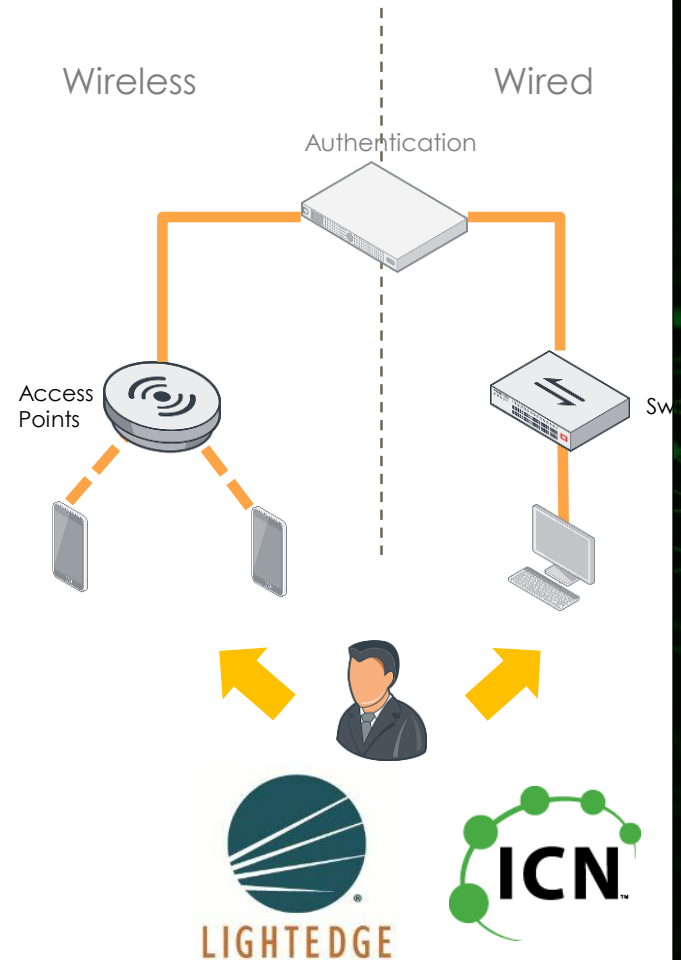
BROADBAND STRONG
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Trend: Seamless User Experience

A unified access experience is the expected norm

- Users utilize multiple devices in the enterprise
 - Wireless: smartphone, tablets
 - Wired: desktops, workstations
- Consistent user experience is the norm
 - Consistent policies for access, application, security
- Seamless device experience
 - New device types must be provisioned appropriately
 - “Headless” devices – IoT



Trend: Unified Network Operations

Management of networks and applications must be simplified

Network Management



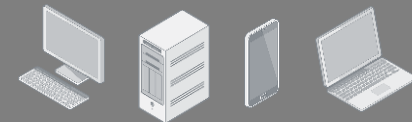
- **Network Management:** across wired, wireless and security – single pane
- **Control:** switches, access points, security appliances
- **Performance:** latency, roaming, speed

Application Management



- **Application Management:** Application visibility, application control
- **Prioritization:** for video, voice, and data traffic. Prioritize application type: enterprise vs streaming media
- **SLAs / QoS:** must be guaranteed for mission critical applications

Device Management



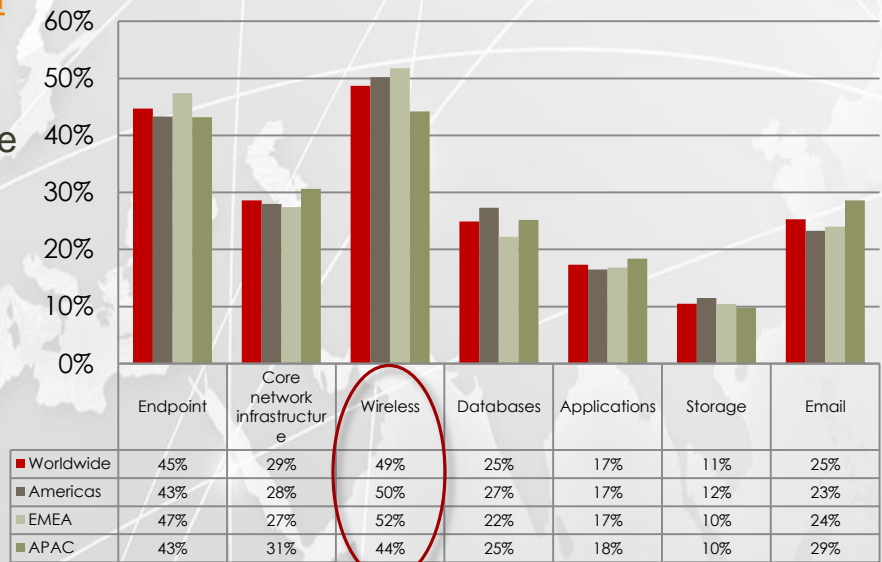
- **Devices Management:** to classify and secure different device types. Device fingerprinting
- **Authentication:** Identity management and onboarding of devices. MDM, NAC.
- **Presence:** Asset tracking via tags. Retail analytics - device tracking of known and unknown users

Networks are Vulnerable

Recent data breaches point to network weaknesses

- US FAA cites In-flight wireless entertainment systems open to cyberattacks.
 - [GAO-15-370 Report to Air Traffic Control Report](#)
- Hackers breach Wi-Fi to keylog targeted executive's devices – specifically those in the defense industry.
 - [Darkhotel hackers zero day hack](#)
- Large loss of credit-card data was brought about because of lax wireless LAN security.
 - [TJ Maxx security breach](#)
- Recent survey of 1490 respondents point to WLAN as the Most Vulnerable IT infrastructure
 - 49% cite Wireless as 'Most Vulnerable'
 - 13% Totally Open - not using passwords for guest access
 - [Wireless Security Survey 2015](#)

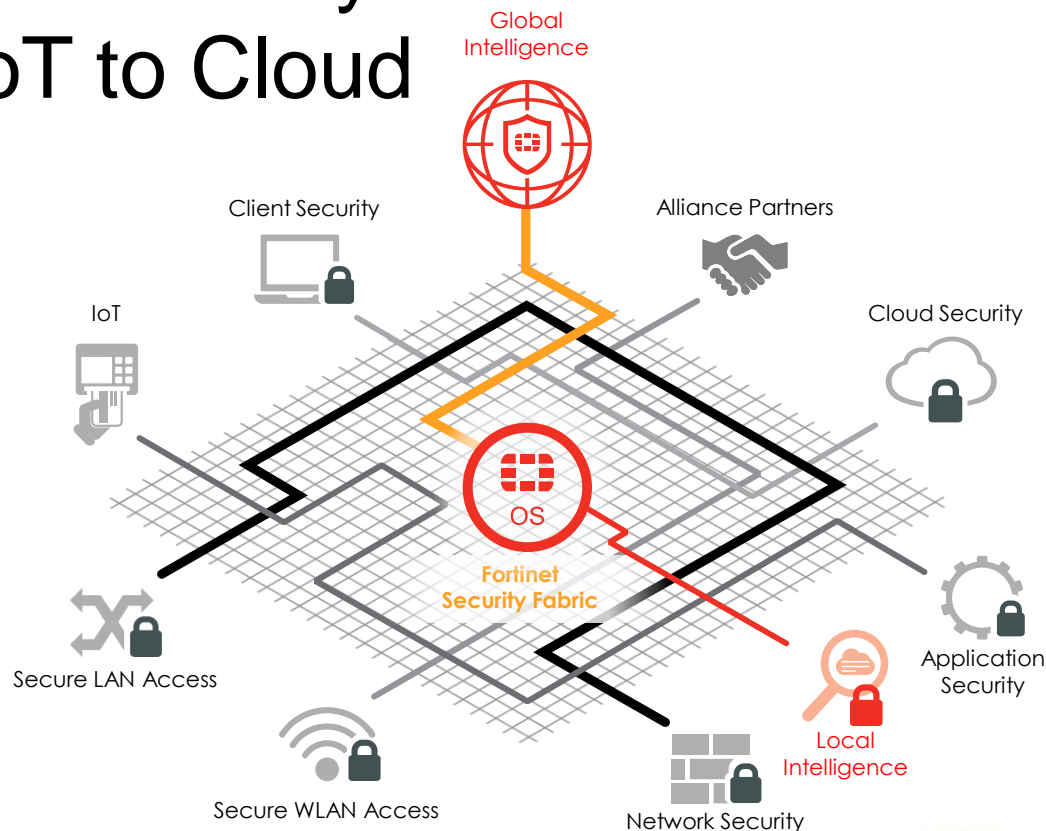
WLAN Ranked as the Most Vulnerable IT infrastructure



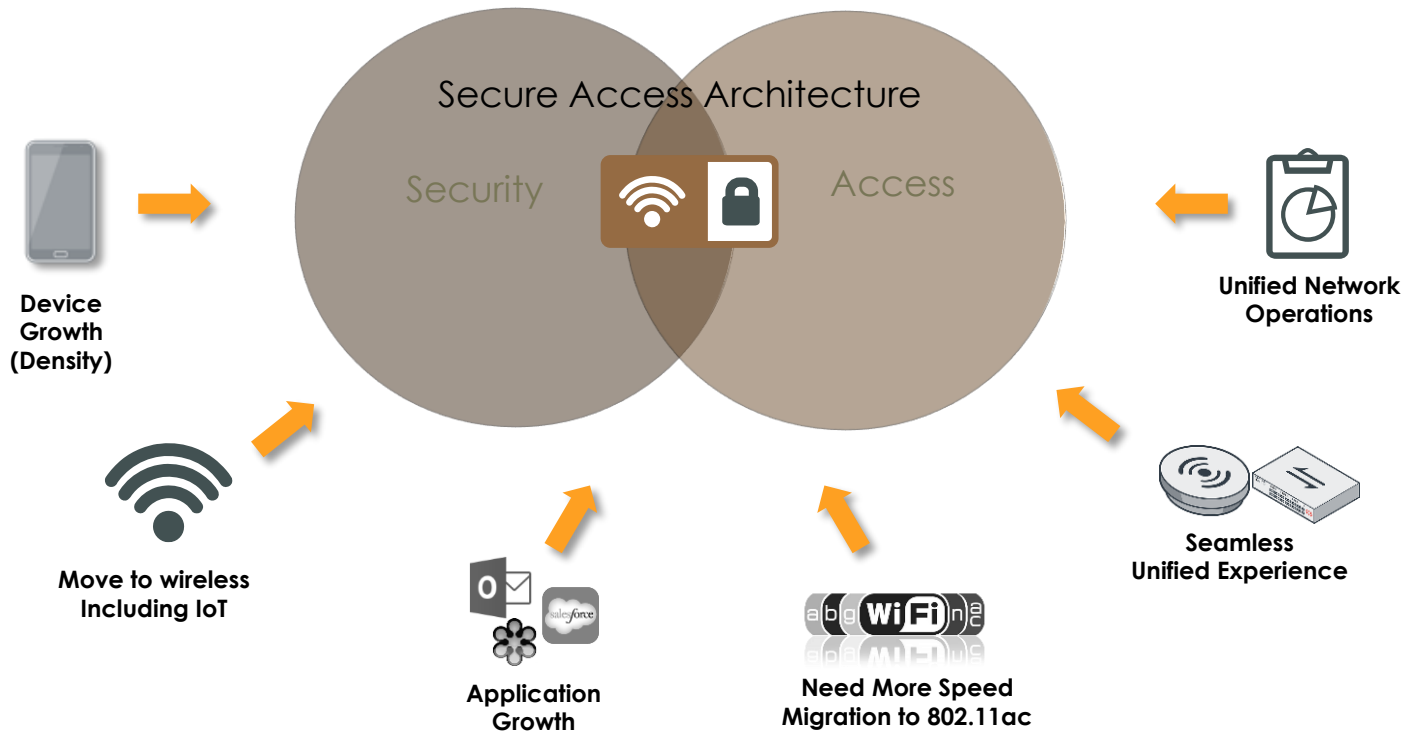
Source: Fortinet Security Census 2015, 1490 respondents

Fortinet Security Fabric – Protecting from IoT to Cloud

Scale
Awareness
Security
Actionable
Open



Combining Security and Access

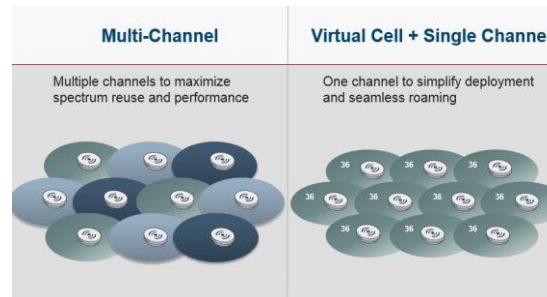
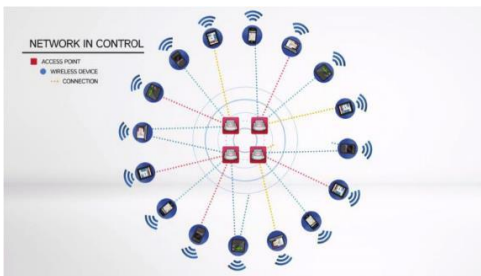


Infrastructure

Secure access solution that provides flexibility

Why
Infrastructure?

- **Mobile:** Fit for highly mobile and scalable deployments where low latency and roaming support matter
- **Flexibility:** Channel planning flexibility to shorten site survey and deployment times
- **Choice:** Able to separate access infrastructure purchase decision from security purchase



Security



WLAN
Management



Mobility / Roaming / Scale

- Supports highly mobile environments
- Lowest latencies for video and voice traffic

Channel Planning Flexibility

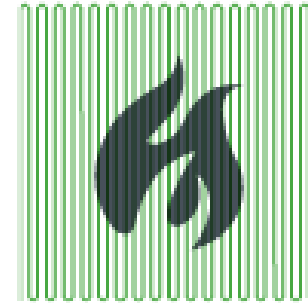
- Reduce site survey planning
- Reduce deployment times

Choice

- Security and access unbundled
- Ability to pick and choose best options

AramidFW

- Firewall
- Virtual Private Network (VPN)
- Intrusion Prevention Service (IPS)
- Web Filtering
- Anti-Malware
- Wi-Fi Controller
- Advanced Threat Protection



- Firewall Migration
- Hardware Assurance Plan Protection
- Proactive Threat Library Access

icn.iowa.gov/services/aramidfw

Future & Recorded Webinars

- **Cyber Security Best Practices**

Date: October 11

Time: 10 AM – 11 AM

- **Recorded Sessions on the ICN Website**

- Manage 1:1 and Bring your own Device (BYOD)
- Allocate Resources for Testing

<https://icn.iowa.gov/about/news-and-media/videos-and-presentations>

Questions?

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